

Claims

1. A transformant into which has been incorporated a DNA for coding a foreign protein having lactate dehydrogenase activity and provided with pyruvic acid substrate affinity that equals or exceeds the pyruvic acid substrate affinity of the pyruvate decarboxylase inherent in the host organism.
2. The transformant according to Claim 1, wherein the aforementioned foreign protein is a bovine-derived lactate dehydrogenase or its homologue.
3. The transformant according to Claim 1, wherein the aforementioned foreign protein is a protein comprised of the amino acid sequence shown in sequence number 1 or its homologue.
4. The transformant according to Claim 3, wherein the aforementioned foreign albumen is coded by the DNA sequence shown in sequence number 3.
5. The transformant according to Claim 4, having the DNA sequence shown in sequence number 4 as the DNA sequence for coding the aforementioned foreign albumen.
6. The transformant according to Claim 1, wherein the aforementioned host organism belongs to the *Saccaromyces* family.
7. The transformant according to Claim 2, wherein the aforementioned host organism is *Saccaromyces cerevisiae*.
8. The transformant according to Claim 1, wherein the DNA for coding the aforementioned foreign protein has been controllably incorporated by the promoter of the pyruvate decarboxylase gene on the host chromosome or by a homologue of said promoter that replaces said promoter.
9. The transformant according to Claim 8, wherein said foreign protein is a bovine-derived lactate dehydrogenase or its homologue.
10. The transformant according to Claim 8, wherein the aforementioned host organism belongs to the *Saccaromyces* family.
11. The transformant according to Claim 9, wherein the aforementioned host organism is *Saccaromyces cerevisiae*.
12. The transformant according to Claim 8, wherein the aforementioned promoter is the promoter of the pyruvate decarboxylase 1 gene.
13. The transformant according to Claim 8, wherein DNA comprised of the base sequence described in sequence number 2 or its homologue is used as the aforementioned promoter.
14. A transformant into which has been incorporated DNA for coding a foreign protein having lactate dehydrogenase activity and provided with pyruvic acid substrate affinity that equals or exceeds the pyruvic acid substrate affinity of the pyruvate decarboxylase inherent in the host organism, wherein the host organism is *Saccaromyces cerevisiae*, and the DNA for coding the aforementioned foreign protein has been controllably incorporated by the promoter of the pyruvate decarboxylase 1 gene on the host chromosome or by a homologue of said promoter that replaces said promoter.
15. The transformant according to Claim 14, wherein said foreign protein is a bovine-derived lactate dehydrogenase or its homologue.
16. A transformant into which the DNA for coding the bovine-derived lactate dehydrogenase or its homologue has been controllably incorporated by the promoter of the pyruvate decarboxylase 1 gene on the host chromosome of the *Saccaromyces* family or by a homologue of said promoter that replaces said promoter, and wherein the structural gene of the pyruvate decarboxylase 1 on the host chromosome has been destroyed.
17. The transformant according to Claim 16, wherein the aforementioned host is *Saccaromyces cerevisiae*.

18. A lactic acid manufacturing method provided with a process for culturing the transformant described in Claim 1, and

a process for separating lactic acid from the cultured product obtained in the aforementioned process.

19. A lactic acid manufacturing method provided with a process for culturing the transformant described in Claim 14, and

a process for separating lactic acid from the cultured product obtained in the aforementioned process.